its point directed downwards, and completely resembling in its aspect the interspinous bones which sustain the rays of the fins. It is of the same nature as these.

b. The rays are represented by two small osseous rods, laid transversely in a horizontal plane, and articulated by their base, at the level of the median line, with the corresponding interspinous bone. Each of these rods, taken by itself, represents one-half of a fin-ray; this half, instead of remaining united with its opposite half in a vertical plane, has departed from it to fall down on the side.

c. The articular ossicle is an unpaired symmetrical bone, extended across the disk, of which it occupies the whole width. It consists of a very narrow median portion and of two lateral portions, which are widened into laminæ or quadrilateral palettes. From the upper surface of the latter springs a small lamellar apophysis directed backwards (articular apophysis), beneath which the extremity of the ray belonging to the same segment is attached.

This ossicle, the nature of which has hitherto been misunderstood, must, in my opinion, be regarded as the equivalent of the little osseous nodule which occurs in the fin in the space left between the bases of the two halves of a ray.

As regards the mechanism by means of which the fixation of the disk is effected, this is easy to understand when we have ascertained the arrangement of the pieces of this little apparatus.

Each ray, in fact, serves as a support to a lamina of the disk. It is capable of moving upon its anterior border as upon a hinge, and consequently of inclining the lamina with which it corresponds either forwards or backwards. This double movement is effected by means of small muscles inserted, on the one hand, upon an apophysis of the base of the rays projecting at the lower surface of the disk, and, on the other, upon the interspinous bones of the neighbouring segments. These bundles correspond with the elevator and depressor muscles of the rays of fins.

It is easy to demonstrate, by means of a very simple geometrical construction, that when the lamellæ of the disk are raised, the space which they intercept is enlarged; the air consequently tends to become rarefied in this space, and, as all communication with the exterior is interrupted by the cutaneous fold which borders the disk, an effect of suction is thus produced, exactly comparable to that of the cupping-glass.—*Comptes Rendus*, March 18, 1867, pp. 625–627.

Apus *and* Branchipus.

Mr. Grunow has lately discovered at Pottenstein, near Vienna, a locality of *Apus cancriformis* and of *Branchipus stagnalis*, the two Phyllopoda remarkable for their affinity with the extinct *Hymenocaris*, *Ceratiocaris*, *Dithyrocaris*, and Limuloid Crustaceans. The *Apus* and *Branchipus* under notice live in a pool about 20 feet broad and 30 feet long, which is completely dried up in summers that are hot throughout. In September 1866 myriads were observed in the slimy water of the pool.—*Imp. Geol. Instit. Vienna*, Feb. 19, 1867.